The analysis of Time Complexity here is quite complex.In the queen_func function the recursive call(which takes deals with n-1 queens) has a running time of T(n-1), which will run only for safe cells. And the max safe cells will be at most equal to n or less than that.
So the queen_func function will take a time of n*T(n-1).
Since the for loop in queen_func function will run for N times,the on_attack function runs for O(N-n) which is equal to O(N).

The overall time function of the algorithm is
$T(n) = O(N^2) + n*(T(n-1))$
we can write T(n-1) as O(N2) + n*(T(n-2)),
thus,T(n) = O(N2) + n*(O(N2) + n*(T(n-2)))
now replacing T(n-2) by appropriate value and so on…
we finally get,
$T(n) = O(N^2)(O(n-2)!) + O(n!)$
And finally the time complexity(Worst case) will be O(n!).

Space Complexity: O(N*N), Here N is input size.